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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------|
| 10/764,982 | 01/26/2004 | Michael R. Rice | 007163 | 6602 |
| 41161 | 7590 | 06/24/2005 | USA/SYNX/SYNX/JB1 | |
| DUGAN & DUGAN, PC 55 SOUTH BROADWAY TARRYTOWN, NY 10591 | | | EXAMINER DEUBLE, MARK A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3651 | |
| DATE MAILED: 06/24/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/764,982 | Applicant(s) RICE ET AL. | |
| | Examiner Mark A. Deuble | Art Unit 3651 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-184 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4/25/05, 4/25/05, 4/22/05, 4/22/05, 9/15/04</u> | 6) <input type="checkbox"/> Other: ____ |

Handwritten signature/initials

Continuation of Disposition of Claims: Claims withdrawn from consideration are 6,9-16,23,25-57,60-62,64,68,70-74,77,79,83-88,90-106,109,111,115-120,122-164,167,171,173-175 and 177-184.

Continuation of Disposition of Claims: Claims rejected are 1-5,7,8,18-22,24,58,59,63,65-67,69,75,76,78,80-82,89,107,108,110,112-114,121,165,166,169,170,172 and 176.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I, and the Species of Fig. 24, in the reply filed on April 11, 2005 is acknowledged.
2. Claims 6, 9-16, 23, 25-57, 60-62, 64, 68, 70-74, 77, 79, 83-88, 90-106, 109, 111, 115-120, 122-164, 167, 171, 173-175, and 177-184 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 11, 2005. While the reply stated that claims 94, 96-98, 100, 106, 126, 128-130, 132, 138, 140, 142-144, 146, 152, 154, 156-158, and 178-179 were readable on the elected species, these claims depend from independent claims 90, 122, 139, 153, and 177 which were not listed by the applicant as being readable on the elected species and therefore they have been withdrawn accordingly.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 18-22, 66-67, 81-82, and 113-114 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 18, 66, 81, and 113 all recite a "first feature adapted to identify a beginning of the ribbon." This renders the scope of the claims impossible to ascertain because it is not understood by the examiner how a ribbon formed into a continuous loop has a beginning. It is recommended

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that the language be amended to recite, "a first feature adapted to identify a location on the ribbon."

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4-5, 7-8, 18-19, 24, 58-59, 63, 66, 69, 75-76, 78, 81, 89, 107-108, 110, 113, 121, 165-166, 169, 172, and 176 are rejected under 35 U.S.C. 102(b) as being anticipated by PCT document number WO/01/73678 A1.

The PCT document shows a conveyor system which is adapted for use in delivering substrate carriers within a semiconductor device manufacturing facility and which is actually used in a manufacturing facility for devices having semiconductor chips therein. The system employs a continuously rotating ribbon 6 that forms a closed loop along a portion of the facility that is adapted to be flexible in a horizontal plane and rigid in a vertical plane when the ribbon is positioned so that the surface 10 is positioned in a vertical plane. When this is done, the ribbon could be viewed as having a vertical portion 3 adapted to support substrate carriers and a plurality of separate horizontal portions 7 coupled to the vertical portion that are adapted to support a weight of the ribbon. The horizontal portions have slots evenly spaced along the ribbon between sections of the horizontal portions which are adapted to increase the flexibility of the ribbon in a horizontal direction. The vertical portion has perforation holes at its edges that form a first feature that could be used to identify the beginning of the ribbon by a sensor

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detecting their passage. The vertical portion also has a plurality of supports 12 that are adapted to support and transport a single substrate carrier. While it is recognized by the examiner that the ribbon of the PCT document is used to transport a chip 1 rather than a substrate carrier that is used in the processing of semiconductor substrates of the type shown in the present application, the chip 1 may itself be considered a substrate carrier because it contains a completed semiconductor substrate. Furthermore, even assuming for the sake of argument that the chip 1 is not a substrate carrier, the supports 12 would still meet the limitation of claims 24, 69, 76, 107, and 172 requiring supports adapted to support and transport a substrate carrier because the passive language of the claims only required that they are capable of supporting some kind on substrate carrier which they would be capable of doing. Thus the PCT document shows all the structure required by claims 1-2, 4-5, 7-8, 18-19, 24, 58-59, 63, 66, 69, 75-76, 78, 81, 89, 107-108, 110, 113, 121, 165-166, 169, 172, and 176.

7. Claims 1-3, 5, 7-8, 18-22, 24, 58-59, 63, 66-67, 69, 75-76, 78, 81-82, 89, 107-108, 110, 113-114, 121, 165-166, 169-170, 172, and 176 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese document number 2003-72835.

The Japanese document shows a conveyor system which is adapted for use in delivering substrate carriers within a semiconductor device manufacturing facility and which is actually used in a manufacturing facility for devices having semiconductor chips therein. The system employs a continuously rotating ribbon 1 that forms a closed loop along a portion of the facility that is adapted to be flexible in a horizontal plane and rigid in a vertical plane as can be seen in the overhead views Fig. 11. As can be seen in the cross sectional views, the ribbon has vertical portions formed by the edges of the ribbon and by the back of the pocket 11 that are adapted to

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support substrate carriers and a plurality of separate horizontal portions formed integrally with the vertical portion by the sides of the pocket that are adapted to support a weight of the ribbon. The horizontal portions have slots evenly spaced along the ribbon between sections of the horizontal portions forming the pockets so that the flexibility of the ribbon in a horizontal direction is increased. The vertical portion has perforation holes 13 at its edges that form a first feature that could be used to identify the beginning of the ribbon by a sensor detecting their passage. A second feature that could be used to identify a location at which a substrate carrier may be held is formed by either the members 12 or the holes 14. Thus the Japanese document shows all the structure required by claims 1-3, 5, 7-8, 18-20, 58-59, 63, 66-67, 69, 76, 78, 81-82, 89, 107-108, 110, 113-114, 121, 165-166, 169-170, 172, and 176 except for the supports of claims 24, 69, 76, 107, and 172. However, none of claims 24, 69, 76, 107, and 172 require vertical and horizontal portions. Therefore, the vertical and horizontal portions formed by the pockets 11 may alternatively be viewed as the supports required by claims 24, 69, 76, 107, and 172. While it is recognized by the examiner that the ribbon of the Japanese document is used to transport a chip 5 rather than a substrate carrier that is used in the processing of semiconductor substrates of the type shown in the present application, the chip 5 may itself be considered a substrate carrier because it contains a completed semiconductor substrate. Furthermore, even assuming for the sake of argument that the chip 5 is not a substrate carrier, the supports 12 would still meet the limitation of claims 24, 76, 107, and 172 requiring supports adapted to support and transport a substrate carrier because the passive language of the claims only required that they are capable of supporting some kind on substrate carrier which they would be capable of doing. Thus the Japanese document shows all the structure required by claims 1-3, 5, 7-8, 18-22, 24, 58-

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59, 63, 66-67, 69, 75-76, 78, 81-82, 89, 107-108, 110, 113-114, 121, 165-166, 169-170, 172, and 176.

8. Claims 1, 17-22, 24-25, 58-59, 65-67, 69, 75-76, 80-82, 89, 107-108, 112-114, and 121 rejected under 35 U.S.C. 102(b) as being anticipated by Gramarossa et al. (U.S. patent No. 4,775,046).

Gramarossa et al. shows a conveyor system that is adapted for use in delivering substrate carriers within a semiconductor device manufacturing facility. The system employs a continuously rotating stainless steel ribbon 10 that forms a closed loop along that is adapted to be flexible in a horizontal plane and rigid in a vertical plane. The ribbon has a vertical portion with perforation holes 13 at its edges that form a first feature that could be used to identify the beginning of the ribbon by a sensor detecting their passage. A second feature that could be used to identify a location at which a substrate carrier may be held is formed by the openings between adjacent gripper members 16. The gripper members 16 form a plurality of supports that are adapted to support and transport a single substrate carrier by a top flange thereon through cradle members 28 and 22. Thus Gramarossa et al. shows all the structure required by claims 1, 17-22, 24-25, 58-59, 65-67, 69, 75-76, 80-82, 89, 107-108, 112-114, and 121.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The art cited by the examiner and not discussed above show various forms of conveyor systems employing horizontally flexible ribbons in a fashion similar to that of the present invention.

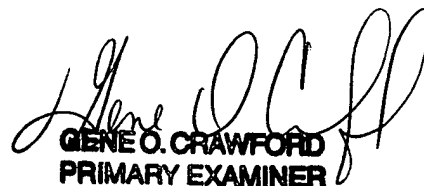
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Deuble whose telephone number is (571) 272-6912. The examiner can normally be reached on Monday through Friday except for alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene O. Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

md


GENE O. CRAWFORD
PRIMARY EXAMINER